## Remarks

Thorough examination and careful review of the application by the Examiner is noted and appreciated.

Claims 1-8 have been canceled.

Claims 9-16 have been newly added and are pending in the application.

No new matter has been added. Support for the newly added claims is found in the originally and previously presented claims, the Figures and the Specification.

## REJECTIONS UNDER 35 U.S.C. 112

The Examiner rejected claims 1, 2, 4-8 under 35 U.S.C. 112, first paragraph,

> **"as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims are drawn to a circuit for monitoring voltage spikes in a power converter and the specification is drawn to a digitally encoded vehicle switch."**

Accordingly, claims 1,2,4-8 were canceled, thereby rendering Examiner's rejections under 35 U.S.C. 112, first paragraph moot.

**OBJECTIONS UNDER 35 U.S.C. 132(a)**

The Examiner objected to the amendment filed 1/25/11 under 35 U.S.C. 132(a) because

> **"it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The amended claims are drawn to a circuit for monitoring voltage spikes in a power converter and the specification is drawn to a digitally encoded vehicle switch. Applicant is required to cancel the new matter In the reply to this Office Action."**

Accordingly, as discussed *supra*, claims 1, 2, and 4-8 that were directed to a circuit for monitoring voltage spikes in a power converter have been canceled in accordance with Examiner's requirement to cancel new matter that was not supported by Applicants' Original Application.

**REJECTIONS UNDER 35 USC §§ 102, 103**

Claims 1, 2, 4-6, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Massie (US 5,822,166).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Massie.

As claims 1-8 were canceled, Examiner's rejections under 35 U.S.C. 102 and 103 are rendered moot. Therefore, Applicant respectfully requests removal of the rejections of claims 1-8

U.S.S.N. 09/640,809

based on 35 USC §§ 102, 103.

With regard to Claims 9-16, Claims 9-16 are newly added and are in general directed to a digitally encoded switch system for operating a plurality of vehicle lamps and not to a circuit for monitoring voltage spikes in a power converter as disclosed in Massie.

In particular, claim 9 includes the following limitations that are supported in Applicants' Application as follows:

"A digitally encoded switch system for operating a plurality of vehicle lamps comprising: a plurality of vehicle lamps" (Applicants' Specification, pg. 1, lines 18-26, Summary of the invention; Original claim 1);

"a multi-position switch circuit having a plurality of selectable switch positions, the multi-position switch circuit being connected to a voltage source and including a plurality of switch contacts for selectively connecting given ones of the switch contacts to the voltage source for creating different open and closed circuit conditions for corresponding positions of the multi-position switch circuit" (Applicants' Specification, page 1, lines 18-26, summary of the invention; page 2, lines 18-36 Original claim 1); and

a control module including a microprocessor connected to the multi-position switch circuit and to the plurality of vehicle

lamps for illuminating selected ones of the vehicle lamps in accordance with the open and closed circuit conditions created by the multi-position switch circuit (Applicants' Application, page 1, lines 18-26, summary of the invention; page 2, lines 18-36; Original claim 1).

Unlike Applicants' invention as disclosed in Claim 9, Massie fails to disclose, teach or suggest:

> **"A digitally encoded switch system for operating a plurality of vehicle lamps comprising:**
> **a plurality of vehicle lamps;**
> **a multi-position switch circuit having a plurality of selectable switch positions, the multi-position switch circuit being connected to a voltage source and including a plurality of switch contacts for selectively connecting given ones of the switch contacts to the voltage source for creating different open and closed circuit conditions for corresponding positions of the multi-position switch circuit; and**
> **a control module including a microprocessor connected to the multi-position switch circuit and to the plurality of vehicle lamps for illuminating selected ones of the vehicle lamps in accordance with the open and closed circuit conditions created by the multi-position switch circuit.**

Instead, Massie discloses a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39. Additionally, Massie is directed to suppressing transients at the circuit board level and Applicants' invention is directed to a digitally encoded switch system in a vehicle. It would not have been obvious to one skilled in the art of at the time of the invention to modify transient suppression circuits for dc power busses of

Massie to include a digitally encoded switch system of Applicants' invention as claimed in Claim 9 because addition of such a digitally encoded switch system to Massie would not in any way assist in the transient suppression taught by Massie.

In particular, claim 10 includes the following limitations including support in Applicants' Application as follows: "The digitally encoded switch system of claim 1 in which the switch contacts of the multi-position switch circuit provide digitally coded signals" (Applicants' Specification, page 1, lines 18-26, summary of the invention; page 2, lines 18-36; Original claim 2);

"wherein an open circuit condition manifests a first binary state and a closed circuit condition manifests a second binary state, and wherein the control module microprocessor is responsive to the digitally coded signals manifested by the circuit conditions of the multi-position switch circuit to illuminate selected ones of the vehicle lamps in accordance with the digital code" (Applicants' Specification, page 1, lines 18-26, page 3, lines 7-19, FIG. 3; Original claim 2); and

"wherein the digitally encoded switch system includes failure mode robustness via decode software that that interprets circuit state failure modes when a line is permanently shorted or open and provides a best lighting function alternative that most closely resembles a lighting function selected by the user"

U.S.S.N. 09/640,809

(Applicants' Specification, page 3, lines 21-36, page 4, lines 1-6; Pg. 6, lines 26-35 through pg 7, lines 1-5; FIGS. 2-3, 4A-4D; Original Claim 2).

Massie fails to disclose, teach or suggest the limitations of claim 10 as follows:

> **The digitally encoded switch system of claim 9 in which the switch contacts of the multi-position switch circuit provide digitally coded signals;**
> **wherein an open circuit condition manifests a first binary state and a closed circuit condition manifests a second binary state, and wherein the control module microprocessor is responsive to the digitally coded signals manifested by the circuit conditions of the multi-position switch circuit to illuminate selected ones of the vehicle lamps in accordance with the digital code;**
> **wherein the digitally encoded switch system includes failure mode robustness via decode software that that interprets circuit state failure modes when a line is permanently shorted or open and provides a best lighting function alternative that most closely resembles a lighting function selected** by the user.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the digitally encoded switch system of claim 10, which further include

the switch contacts of the multi-position switch circuit provide digitally coded signals;

wherein an open circuit condition manifests a first binary state and a closed circuit condition

manifests a second binary state, and wherein the control module microprocessor is responsive to the digitally coded signals manifested by the circuit conditions of the multi-position switch circuit to illuminate selected ones of the vehicle lamps in accordance with the digital code; and

wherein the digitally encoded switch system includes failure mode robustness via decode software that that interprets circuit state failure modes when a line is permanently shorted or open and provides a best lighting function alternative that most closely resembles a lighting function selected by the user.

Claim 11 was newly added to include the following limitations:

"The digitally encoded switch system of claim 9, wherein the plurality of vehicle lamps include a left low beam headlamp and a left high beam headlamp, a right low beam headlamp and a right high beam headlamp, a left front fog lamp, a right front fog lamp, a left rear fog lamp, a right rear fog lamp, a left park lamp, and a right park lamp." Support for claim 11 is disclosed in Applicants' Specification, page 2, lines 18-36; Original Claim 3.

It would not have been obvious to one skilled in the art at

the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the digitally encoded switch system of claim 11, which further include wherein the plurality of vehicle lamps include a left low beam headlamp and a left high beam headlamp, a right low beam headlamp and a right high beam headlamp, a left front fog lamp, a right front fog lamp, a left rear fog lamp, a right rear fog lamp, a left park lamp, and a right park lamp.

Claim 12 was newly added to include the following limitations:

"The digitally encoded switch system of claim 11 wherein a relay driver circuit, a multifunction dimmer switch and a relay are connected between the microprocessor and left and right high beam headlamp to selectively illuminate the headlamps in accordance with output signals from the microprocessor." Support for claim 12 is disclosed in Applicants' Specification, page 5, lines 34-36 continue page 6, lines 1-21; Original Claim 4.

Unlike Applicants' invention, Massie, does not disclose, teach, or suggest the limitations of claim 12 as follows: "The digitally encoded switch system of claim 10 wherein a relay driver circuit, a multifunction switch and a relay are connected between the microprocessor and left and right high beam headlamp to selectively illuminate the headlamps in accordance with output

signals from the microprocessor. Instead, Massie shows a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the digitally encoded switch system of claim 12, which further include wherein a relay driver circuit, a multifunction switch and a relay are connected between the microprocessor and left and right high beam headlamp to selectively illuminate the headlamps in accordance with output signals from the microprocessor.

Claim 13 was newly added to include the following limitations:
"The digitally encoded switch system of claim 12, wherein the multi function switch selectively illuminates the headlamps, high beams or flash to pass (ftp) independent of a microprocessor failure." Support for claim 13 is disclosed in Applicants' Specification, page 4, lines 8-22.

Massie fails to disclose, teach or suggest the limitations of claim 13 as follows: "The digitally encoded switch system of claim 12 wherein the multi function switch selectively illuminates the headlamps, high beams or flash to pass (ftp)

independent of a microprocessor failure. Instead, Massie shows a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the multi-function switch of claim 13 to selectively illuminate the headlamps, high beams or flash to pass (ftp) independent of a microprocessor failure.

Claim 14 was newly added to include the following limitations: "The digitally encoded switch system of claim 10, wherein a left low beam high side driver circuit and a right low beam high side driver circuit are connected between the microprocessor and the left low beam headlamp and right low beam headlamp respectively to selectively illuminate the headlamps in accordance with output signals from the microprocessor." Support for claim 14 is disclosed in Applicants' Specification, page 5, lines 34-36 continue page 6, lines 1-21; Original Claim 5.

Massie fails to disclose, teach or suggest the limitations of claim 14 as follows: wherein a left low beam high side driver

circuit and a right low beam high side driver circuit are connected between the microprocessor and the left low beam headlamp and right low beam headlamp respectively to selectively illuminate the headlamps in accordance with output signals from the microprocessor. Instead, Massie shows a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the multi-function switch of claim 14 to include wherein a left low beam high side driver circuit and a right low beam high side driver circuit are connected between the microprocessor and the left low beam headlamp and right low beam headlamp respectively to selectively illuminate the headlamps in accordance with output signals from the microprocessor.

Claim 15 was newly added to include the following limitations:

"The digitally encoded switch system of claim 2 wherein a front fog lamp relay and a rear fog lamp relay are connected between the multi-position switch circuit and the left front, right front, and left rear, right rear fog lamps respectively to selectively illuminate the fog lamps in accordance with output

signals from the microprocessor." Support for claim 15 is disclosed in Applicants' Application, page 5, lines 34-36 continue page 6, lines 1-21; Original Claim 6.

Massie fails to disclose, teach or suggest the limitations of claim 15 as follows: The digitally encoded switch system, wherein a front fog lamp relay and a rear fog lamp relay are connected between the multi-position switch circuit and the left front, right front, and left rear, right rear fog lamps respectively to selectively illuminate the fog lamps in accordance with output signals from the microprocessor. Instead, Massie shows a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the digitally encoded switch system of claim 15, which further include wherein a front fog lamp relay and a rear fog lamp relay are connected between the multi-position switch circuit and the left front, right front, and left rear, right rear fog lamps respectively to selectively illuminate the fog lamps in accordance with output signals from the microprocessor.

Claim 16 was newly added to include the following limitations:

"The digitally encoded switch system of claim 2 including an autolamp sensor device connected to the control module to provide ambient light information to the control module."

Support for claim 16 is disclosed in Applicants' Application, page 2, lines 18-36, page 5, lines 34-36 continue page 6, lines 1-21; Original Claim 7.

Massie fails to disclose, teach or suggest the limitations of claim 16 as follows: an autolamp sensor device connected to the control module to provide ambient light information to the control module." Instead, Massie shows a transient suppression circuit for dc power bus. Massie, col. 1, lines 26-39.

It would not have been obvious to one skilled in the art at the time of the invention to modify the a transient suppression circuit for dc power bus of Massie to include the features of the digitally encoded switch system of claim 16, which further include an autolamp sensor device connected to the control module to provide ambient light information to the control module.

Claims 9-16 have been added to further clarify the features a digitally encoded switch system for operating a plurality of

vehicle lamps. None of the features disclosed in claims 9-16 are disclosed in the Massie reference directed to a circuit for monitoring voltage spikes in a power converter.

Based on the foregoing, the Applicants respectfully submit that all the pending Claims, i.e. Claims 9-16 are now in condition for allowance. Such favorable action by the Examiner at an early date is respectfully solicited.

In the event that the present invention as claimed is not in condition for allowance for any reason, the Examiner is respectfully invited to call the Applicants representative at his Bloomfield Hills, Michigan office at (248) 540-4040 such that necessary action may be taken to place the application in a condition for allowance.

Respectfully submitted,

Randy W. Tung,
Registration No. 31311